

Appl. No.: (not yet assigned)
(U.S. National Stage of PCT/AT03/00253)
Preliminary Amdt. Dated March 22, 2005

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in this application.

1. (Currently Amended) A device for producing a gas-liquid mixture ~~and, in particular, air-water mixture~~ in the ~~region vicinity~~ of cutting tools, ~~particularly chisels~~, arranged on at least one cutter head (10) or cutter drum rotationally mounted on a cutter arm (5) of a cutting machine (1), including comprising

at least one nozzle pair comprised of a nozzle (14) for ejecting a gas jet and a nozzle (13) for ejecting a liquid jet,

~~the axes (17, 18) of the nozzle nozzles (13, 14) of a nozzle pair being oriented in a manner that the jets impinge on each other at a distance from the outlet openings of said nozzle nozzles (13, 14), characterized in that wherein~~

~~the axes (17, 18) of the nozzle nozzles (13, 14) of a nozzle pair form an angle with each other of between 45° and 135°, preferably between 75 and 85°.~~

2. (Currently Amended) A The device according to claim 1, characterized in that the wherein a crossing point of the axes (17, 18) of the nozzles (13, 14) of a nozzle pair is located at a distance of less than 100 mm, preferably less than 50 mm, particularly preferred about 8 mm, from the nozzle outlet opening of the gas nozzle (14).

3. (Currently Amended) A The device according to claim 1 or 2, characterized in that the, wherein outlet angles of the liquid nozzles (13) amount to between 5° and 10°.

4. (Currently Amended) A The device according to claim 1, ~~2 or 3, characterized in that the wherein~~ liquid nozzles (13) are designed as circular section jet nozzles whose outlet openings ~~preferably~~ have diameters of about 1 mm.

5. (Currently Amended) A The device according to ~~any one of claims 1 to 4, characterized in that the claim 1, wherein~~ diameters of the outlet openings of the gas nozzles (14) are at least 3 mm ~~and, preferably, about 5 mm.~~

6. (Currently Amended) A The device according to ~~any one of claims 1 to 5, characterized in that claim 1, wherein~~ the gas nozzles (4) ~~(14)~~ are configured to include comprise a whirl chamber arranged upstream of said outlet opening to generate turbulent flows.

7. (Currently Amended) A The device according to ~~any one of claims 1 to 6, characterized in that claim 1, wherein~~ the gas nozzles (14) are designed for a gas supply pressure of 0.6 to 1.5 bar and the liquid nozzles (13) are designed for a liquid supply pressure of 4 to 5 bar.

8. (Currently Amended) A The device according to ~~any one of claims 1 to 7, characterized in that claim 1, wherein~~ the axes (18) of the gas nozzles (14) are arranged to be directed onto the cutting tools ~~and, in particular, tips of the chisels.~~

9. (Currently Amended) A The device according to ~~any one of claims 1 to 8, characterized in that claim 1, wherein~~ a plurality of nozzle pairs are arranged on a nozzle assembly (12) connected with the cutter arm (5) and extending parallel with ~~the an axis of rotation (8) of the cutter head (8) (10).~~

10. (Currently Amended) A The device according to ~~any one of claims 1 to 9, characterized in that the distance of claim 1, wherein distance between neighboring nozzle pairs is less than 150 mm.~~

11. (Currently Amended) A The device according to ~~any one of claims 1 to 10, characterized in that claim 9, wherein~~ the nozzles (13, 14) are pivotally mounted in the nozzle assembly (12).

12. (New) The device according to claim 1, wherein the cutting tools are chisels.

13. (New) The device according to claim 1, wherein the axes (17, 18) of the nozzles (13, 14) of a nozzle pair form an angle with each other of between 75° and 85°.

14. (New) The device according to claim 1, wherein a crossing point of the axes (17, 18) of the nozzles (13, 14) of a nozzle pair is located at a distance of less than 50 mm from the outlet opening of the gas nozzle (14).

15. (New) The device according to claim 1, wherein a crossing point of the axes (17, 18) of the nozzles (13, 14) of a nozzle pair is located at a distance of about 8 mm from the outlet opening of the gas nozzle (14).

16. (New) The device according to claim 1, wherein diameters of the outlet openings of the gas nozzles (14) are about 5 mm.

17. (New) The device according to claim 12, wherein the axes (18) of the gas nozzles (14) are arranged to be directed onto tips of the chisels.

18. (New) The device according to claim 2, wherein outlet angles of liquid nozzles (13) amount to between 5° and 10°.

19. (New) The device according to claim 2, wherein liquid nozzles (13) are designed as circular section jet nozzles whose outlet openings have diameters of about 1 mm.

20. (New) The device according to claim 3, wherein liquid nozzles (13) are designed as circular section jet nozzles whose outlet openings have diameters of about 1 mm.